



Teachout Builders Five Star Home

Charlotte, Michigan

Description

This home, constructed by Teachout Builders and located in Charlotte, is one of five residences constructed in the Energy Resource Division's Five Star Home Grants program. This program was designed to encourage energy efficiency in the design and construction of new houses. A Five Star Home receives 86 to 100 points on the Home Energy Rating Scale. The HER Scale compares a rated home's energy use to a reference home's energy use and assigns points based upon the comparative energy savings or losses. The Teachout home's energy rating was 92 out of 100 points based upon the building plans. The home achieved this rating through the use of several energy efficient innovations and features.



Innovations & Energy Savings Features

- Reddi-wall insulated concrete forms used for the basement walls (these are rated R22 by the manufacturer)
- Radiant in-floor heating in basement floor
- Insulation under basement slab (rated R10)
- Ground source/Geothermal heat pump system used to heat and cool the home (system efficiency can be as high as 400%)
- Energy saving low voltage lighting fixtures and bulbs
- Heat recycling air exchanger (bathroom ventilation air is captured and 80% of the heat energy is recovered and used to preheat ventilation air entering the home)
- Solatube tubular skylight located in the main bathroom
- Home automation system to control lights and heat
- Timed wall switches
- Energy efficient trusses (extra tall trusses that provide additional space for insulation)

Energy Savings

Actual energy costs are not available since the home was just recently completed. The average monthly energy costs, based upon the building plans, are estimated to be \$75/month. This cost includes heating, cooling, water heating, lights and appliances and service charges. The average monthly energy costs for the same home without the energy saving features and with a natural gas furnace are estimated to be \$120/month (energy costs calculated from the Home Energy Rating Program). The savings from the energy efficient innovations would therefore be approximately \$45/month.

For further information contact:

Eliot Eberhard
Teachout Builders
354 S. Cochran, Suite 4
Charlotte, MI 48813
phone: (517) 543-5481
fax: (517) 543-1190

Feel free to contact us if you have any ideas for case studies or other questions :

Michigan Energy Office, Dept. of Labor & Economic Growth
P.O. Box 30221, Lansing, MI 48909
Phone 517/ 241-6228 Fax 517/241-6229
Or Tim Shireman at tashire@michigan.gov

